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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,448	10/25/2001	Yasuo Suda	1232-4782	2051

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EXAMINER

QUIETT, CARRAMAH J

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/028,448	Applicant(s) SUDA, YASUO	
	Examiner Carramah J. Quiett	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/16/2006 has been entered.

Response to Amendment

2. The amendment(s), filed on 08/16/2006, have been entered and made of record. Claims 10-11 are pending.

Response to Arguments

3. Applicant's arguments with respect to claim 10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (U.S. Patent #5,726,709) in view of Sugimori et al. (U.S. Pat. #5,289,269).

For **claim 10**, Kinoshita discloses an image sensing apparatus (fig. 11) comprising:

a single image sensing element (fig. 1, the color separation optical system) having first and second image sensing areas (DG1/DG2) with substantially the same size on a single plane (col. 4, lines 12-38; col. 5, lines 10-15) -- all of fig. 1 illustrates a single imaging element. Fig. 1 also illustrates the first imaging area, which is DG1, and the second imaging area, which is DG2. Then, as shown in fig. 6B, the first and second image sensing areas (DG1/DG2) are substantially the same size. The first imaging area (DG1) is on a single plane and the second imaging area (DG2) is on a single plane;

a photographing optical system that respectively forms first and second object images on the first and second image sensing areas (col. 4, lines 12-38); and

a signal processing device (figs. 11/12, refs. 65) that processes an output signal from said image sensing element (col. 8, lines 13-47 and col. 9, lines 5-45),

wherein each of the first and second image sensing areas has a matrix of a plurality of pixels arranged at a pitch a in the horizontal direction and a pitch b in the vertical direction on a light-receiving surface (col. 5, lines 57-67), the first and second image sensing areas have a positional relationship in which the first and second image sensing areas are separated $axhxc$ in the horizontal direction horizontally and bxc in the vertical direction (where h is a positive integer and c is constant) (col. 6, lines 57-63; col. 7, lines 23-26 and 49-59), said image sensing element forms first and second images which are formed to have an identical spectral distribution and have substantially the same fields of view (col. 7, lines 3-8), and said signal processing device generates a composite image signal based on the first and second images (col. 7, lines 3-8; col. 8, line 38-47). Also, please see figs. 1-13 and read col. 6, lines 39-63; col. 7, lines 3-59.

Please note that in col. 5, lines 57-67, Kinoshita defines the horizontal pixel pitch as $5.7\mu\text{m}$ (pitch a) and the vertical pixel pitch as $5.0\mu\text{m}$ (pitch b). Then in col. 6, lines 57-63 and col. 7, lines 23-26, Kinoshita teaches that image sensor DG1 and DG2 are shifted with a vertical one pixel pitch ($axhxc$, where $h = c = 1$) and shifted with a half horizontal pixel pitch (bxc , where $c = \frac{1}{2}$). Please see figs. 6B and 6C.

However, Kinoshita does not expressly disclose the apparatus wherein both the first and second image sensing areas being arranged on a single plane.

In a similar field of endeavor, Sugimori discloses the apparatus wherein both the first and second image sensing areas being arranged on a single plane. Please see the arrangement of the CCDs 30-33 in figures 1-3 and read col. 3, lines 1-68. In light of the teaching of Sugimori, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the image sensing arrangement of Kinoshita with both the first and second image sensing areas being arranged on a single plane in order to provide better image resolutions, thereby producing digital images of a higher quality (Sugimori, col. 1, lines 55-57 and col. 7, lines 11-16).

For **claim 11**, Kinoshita, as modified by Sugimori, discloses the apparatus wherein said signal processing device corrects a change in spacing between the first and second images during processing of an output signal, and forms a composite image signal based on the first and second images. In Kinoshita, please read col. 8, lines 13-47 and col. 9, lines 5-45.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carramah J. Quiett whose telephone number is (571) 272-7316. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CJQ
August 28, 2006


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER